A GUIDE

TO THE COLLECTION OF

MUSICAL INSTRUMENTS

EXHIBITED IN THE

ETHNOGRAPHICAL GALLERY

OF THE

INDIAN MUSEUM, CALCUTTA

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PREFATORY NOTE.

The musical instruments selected and arranged for exhibition by Dr. Meerwarth, and described in so interesting a manner by him, form the bulk of the old collection of the Asiatic Society of Bengal and of that which has accumulated in the Indian Museum since 1875, when the Trustees took over the custody of the Society's collections. A large proportion of the specimens were presented by the late Raja Sir Sourindro Mohun Tagore, KT., the well-known authority on Indian music. The instruments exhibited are almost exclusively from India or Burma, but a few are of Tibetan origin.

The letters A. S. B. in the description of plates indicate that an instrument is the property of the Asiatic Society of Bengal and was collected before 1875.

N. ANNANDALE,

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CALCUTTA.,

The 7th June, 1917.

The Collection of Musical Instruments in the Indian Museum.

The collection of musical instruments exhibited in the Ethnographical Section of the Indian Museum in Calcutta is unique in India. It is a nearly complete illustration of the musical life of the Indian peoples. To make the collection more accessible to the public, a short description was wanted, and this compilation tries to make up for the want to some extent; for it is a compilation and not an original investigation. Such a work would require the study of years and the result would cover many times the space of this booklet. The works consulted were:—

(1) C. R. Day: *The music and musical instruments of Southern India and the Deccan*, 1891. The book is very rare, only 750 copies having been printed. It is a very valuable source of reference.

(2) Carl Engel: *Musical Instruments*, 1875. This work forms part 5 of the South Kensington Art Hand-books and covers in a very short and sketchy but very instructive manner all the nations of the earth.

(3) The works and compilations of Raja Sir Sourindro Mohun Tagore, *Dr. Mus.*

(4) Catalogue of Indian Musical Instruments presented by Colonel P. T. French, compiled by Captain Meadows Taylor.

(5) A. H. Fox Strangways: *The Music of Hindustan*, 1914.

(6) Different publications on primitive tribes (Andamanese, Abor, Kasi, Oraon, Shan, Santal, etc.).

Music, vocal and instrumental, is a most important factor in Indian life. With Hindus and Buddhists it forms an essential part of all religious ceremonies and processions. No feast is considered complete without a concert, a nautch or the performance of a professional singer. Music enters into daily life in the form of boat songs, melodies

accompanying the different stages of agriculture, etc.; it is closely interwoven with the magic rites of primitive tribes.

It is therefore not surprising that India has, in the long course of its history, evolved a great variety of musical instruments. The greater part of these have been invented and developed in the country, but there are also proofs of foreign influence. Considering the constant and universal use of musical instruments, it is rather astonishing that very little attention is paid by Indian workmen to the materials of which they are made. Instead of making it a matter of careful study, the Indian instrument-maker considers rather his convenience, and takes the material he happens to have handy. On the other hand—and this is also typically Indian and totally different from European usage—he lavishes much care and skill on the decoration of his instruments. It is not rare to find an instrument the sound qualities of which are far from satisfactory covered with beautiful carvings or inlaid with ivory and mother-of-pearl.

For convenience's sake the instruments have been divided into three groups according to the way the sound is produced. The first group is that of string instruments, the second that of wind instruments, and third that of instruments of percussion.

Bull-roarer.

One musical device, however, does not fall under any of these headings, but it is at the same time so full of ethnological interest that it deserves a chapter to itself. It is generally called the "bull-roarer" from the sound it produces though its names are legion. It is found in all the five continents. The ancient Greek knew it, and it is used as a toy in England, Ireland and Central Europe. In Africa it is used and feared as the voice of the terrible God of Vengeance. It is met with among the Eskimos of North America as well as among the primitive tribes of the Amazon.

In Asia it is chiefly in the Malay Peninsula and the Malay Archipelago that we find it. But its highest development is to be seen amongst the primitve tribes of Australia and the Pacific Islands. The principle is very simple indeed. A thin long blade of wood is tied to a whip and swung round with a quick movement. The sound thus

produced resembles either the humming of many blue-bottle flies, the roaring of an angry bull, or the noise of an approaching storm, according to the imagination of the listener. Besides being a favourite amusement for children it has its practical use. The sound reminds a herd of lazy cattle of their annoying enemy, the blue-bottle, and causes them to run; it also frightens away wild animals, as is the case in the Malay Peninsula. From the mighty elephant and the ferocious tiger is only one short step into the world of spirits. Thus we understand how the bull-roarer became associated with magic. Its fearful noise drives away evil spirits, and being stronger than these wicked ghosts it must itself be a mighty spirit. Thus the bull-roarer becomes a god and is surrounded with awe and mystery. In Australia and the Pacific Islands, where it is commonly worshipped, it is death for a woman to look on it, and only the initiated males can see it. On the other hand the storm-like noise it produces was—by way of sympathetic magic—used to produce wind and rain and to act as a hunting and fishing charm. Its universal use and the worship it enjoys in the remotest parts of the earth seem to indicate that its origin goes back to a very ancient period in human history. The size of this instrument varies considerably. The swinging blade reaches a length of three feet in some cases. The specimen in the collection was found in use as a toy among Mahommedans in Chittagong. It is also said to be in use in out-of-the-way villages in Bengal and Orissa.

Group I.—String Instruments.

Of all the sound-producing instruments this class shows the greatest number of varieties. Differences in shape and size, in the number and adjustment of the strings and the possibilities of tuning them, in the ways of producing the sound, in the means of increasing its volume by resonators, all gave impulse to new species with new varieties of sound. But the origin of the sound is the same in all forms, viz., [illegible] The musical possibilities hidden in a [illegible] dawned on man after he had invented the bow. The bow-string hummed in a pleasing way when it sent forth the arrow; and the hunter in his idle moments twanged the string to amuse himself. Thus the first string instrument came into being. Even now, (*e.g.*, among the Nayars of Cochin and Travancore)

the bow is used for musical purposes. References to the sound of the twanging bow-string are frequent in the epics of all nations. Thus emphasis is laid on the terrible sound of Apollo's bow, when he killed the Greeks to avenge Chryses his priest. We find similar descriptions in the Ramayana, the Mahabharata, etc.

In this most primitive instrument the observing mind of man already found most of the fundamental principles the development of which led to the varieties of the present day. By comparing a short bow with a long one he found that the former produced a higher note than the latter. We find a pretty piece of observation in this direction in a Russian epic, describing a fight between the Russians and the Tartars, in which the following passage occurs: "The bows of the gallant knights resounded deeply, but like snakes hissed the strings of the Tartars." The horseman's bow of the Tartars was much shorter than the Russian weapon. The fact also that a tight string produces a sound of higher pitch than a slack one could be studied from the bow, as well as the relation between thickness of string and sound.

So the next step was to fasten a number of strings of different lengths on to the same bow in order to obtain a scale of sounds. Thus the prototype of the harp originated. The pictures of ancient Egypt and the Assyrian reliefs depict this kind of instrument. But still the sounds were thin and weak. The inventive mind of man strove to overcome the fault and created the different types of resonators.

The fact that a piece of skin stretched over a hollow body such as a pot produces a sound of relatively great strength when caused to vibrate must have been known to man at an early period. He used this principle to increase the volume of sound by fastening one end of the string on to such a drum and thus invented one kind of resonator. He gave one end of the bow the shape of a hollow boat and stretched a skin tightly over it, the result being the harp as it is shown by the specimens Nos. 1 and 2. Both these come from Burma. It is curious that this instrument is nowadays not met with in India, though it was once of universal use in Western Asia.

No. 1 represents the more primitive type though it is much more ornate than No. 2. Its fourteen catgut strings are merely tied round the bow and could be tuned only by an

elaborate process of unfastening and refastening. This difficulty has been overcome in No. 2 by the ingenious device of the tuning peg now common to almost all string instruments. The free end of the string is tied round a short peg which fits into a hole in the bow; by turning the peg in one direction or the other the string is tightened or slackened.

Nos. 3 and 4 also represent a very primitive type, though quite different from the preceding ones. The string is not fastened to a bow but kept tight by the left hand of the player. The other end of the string is fastened on the inside of a skin stretched over a hollow cylinder. The tambourine-like resonator is held under the right arm, while the fingers of the right hand twang the string. This kind of instrument is very common in the Deccan, the Central Provinces and Orissa and is known under different names. No. 3 comes from Midnapur and is called *Gabgooki.* No. 4 was purchased in Calcutta and its local name is *Ananda Lahari.* This type of instrument is commonly used by mendicants to accompany their simple songs, generally together with a drum of some kind. Its musical powers are limited to a feeble twang.

No. 5 is a marked improvement. It has a clever arrangement of split bamboo to keep the string tight. By pressing the thin bamboo rods the string can be slackened and the pitch of the sound correspondingly lowered. It also boasts of a tuning peg to change the pitch. The specimen comes from Chota Nagpur and the instrument is called *Nandin* or *Gopichand.*

No. 6 shows the same sound-board, and the string is fastened in the same manner as in Nos. 3, 4 and 5, but it differs in the way the strings are kept tight and tuned. A round stick is fixed on the outer wall of the hollow cylinder, and two strings are tied to tuning pegs moving in this stick. This instrument is called *Thanthona* and comes from Tanjore. It also is a beggar's instrument.

Quite a different kind of resonator is shown in No. 7. This curious instrument is called *Tsaung* and comes from the Shan States. It is a piece of bamboo, which being hollow provides the necessary resonance. The strings are narrow strips of the bark carefully sliced off in such a way that the two ends remain attached. They are tightened by pushing a small piece of wood beneath them like a fret. They are struck with a plectrum held in the right hand. In

the middle of the flattened side of the bamboo there is a rectangular hole covered with a small board of similar shape. This board the player beats with his left thumb and thus obtains a kind of drum accompaniment. The instrument is commonly used among the primitive tribes of the Malay Peninsula.

On a similar type of resonator are founded Nos. 8 and 9. Three strings are stretched along a boat-shaped body, the lower end of which shows a finely carved crocodile head. These instruments come from Burma and Assam and are called *Mingas*, or Alligator guitar.

The next case shows the development of a typically Indian species, the *Vina*. The problem of resonance has been solved in an entirely different manner from that adopted in the preceding types. The strings are stretched over a finger-board and kept tight by pegs. This finger-board rests on two or three hollow bodies—coconuts or gourds—which increase the volume of sound. The strings are supported on frets fixed on the board at certain intervals. By pressing the finger on the string where it touches the fret, its length is reduced and the note becomes correspondingly higher. The frets represent a complete scale, and in this perfected form string instruments are at once uplifted to the rank of concert instruments.

The more primitive instruments of this group are the *Kinnari* and its varieties (Nos. 13, 14, 15). The *Kinnari* is in common use among the peasants and lower castes of Mysore and South Canara. The finger-board is a round stick, often of bamboo, and is placed on three gourds. The frets are stuck to the finger-board with a resinous substance. There are only three strings. The musical capacity of the *Kinnari* is not great and the sound is weak. It is one of the oldest Indian instruments and there is hardly any Sanskrit treatise on music which does not mention it. Its invention is ascribed by Hindu mythology to Kinnari, one of the heavenly musicians. A very primitive beggar's instrument of this type with two coconuts as resonators and cowrie shells as frets is No. 13, the *Dhenka* from Madras. A very ornamental finger-board is shown in No. 15, a two-stringed instrument from the Balaghat district.

Nos. 10, 11, 12 are North Indian *Vinas*. They are also called *Mahati* (great) or *Naradiya Vina*, and Indian

tradition ascribes their invention to the divine seer Narada. The references made to this instrument in Indian literature are innumerable. It is, indeed, the classical instrument of the Hindus. The finger-board rests on two gourd-resonators, each gourd having a round hole cut out of the bottom. The frets are set in semitonic intervals. Their number varies from nineteen to twenty-two. The strings are seven in number. Four pass over the frets and three are side strings for accompaniment, two on the left and one on the right. When played the *Vina* is held over the left shoulder, the upper gourd resting on it, while the lower gourd rests on the right knee. The frets are stopped with the left hand, the little finger occasionally striking the side string on the left side. The strings are struck in a peculiar way. The wrist of the right hand is laid upon the lower gourd and the hand is slightly arched upwards. The first and second fingers are above and strike the large strings, all strokes being made with the nail downwards. The fingers are armed with wire plectra. By passing the plectra rapidly backwards and forwards the notes are quickly reiterated and a kind of *sostenuto* is produced. The sound is not very strong but rather pleasing, and the instrument lends itself to the display of great virtuosity.

No. 16 is the South Indian *Vina*. The fundamental difference between it and the North Indian variety lies in the shape of the resonator. The lower part of the finger-board widens out into a hollow body. The development of this form can be studied from Nos. 19 and 20. These instruments are called *Ektar* and are used by religious mendicants. In them the lower end of the finger-board—which is a round stick—is passed through a hollow body roughly resembling a kettle-drum; the string is fastened to the lower end of the stick, which sticks out on the other side of the resonator. Furthermore the finger-board is not passed through the resonator but glued to it. The resonator in its primitive form is covered with skin, or parchment; in the higher forms thin wood is used. The vibration of the strings is communicated to the resonator by a fret-like piece of wood pushed beneath the strings [illegible] The gourd under the upper [illegible] of the finger-board [illegible] merely as a support. [illegible] and mode of playing [illegible] South Indian *Vina* [illegible] are used. [illegible] North Indian [illegible]

has a great number of varieties, especially in Bengal. They differ mainly in the shape of the resonator. The most important ones are the *Kachapi* or tortoise *Vina* (No. 18), the *Sur-Vina* (No. 17), the *Showktica-Vina* (No. 25), the *Srúti-Vina* (No. 24) and the *Rudra-Vina* (No. 21).

A very common instrument of this type, which corresponds to our guitar, is the *Tamburu*, the classical instrument for accompaniments (No. 31). It has four strings, which are never stopped. This explains the absence of frets. The open strings are struck with the fingers, which are not armed with plectra. The bridge is movable. When played the *Tamburu* is always held upright. It has a pleasant humming sound which forms a very appropriate accompaniment to the manifold variations in the singer's voice. Much art is used in the outward decoration of resonator and finger-board, as shown in the present specimen.

All the instruments described up to now are probably of indigenous origin. It was, however, inevitable that India should have enriched its wealth of musical devices as soon as it came into touch with foreign nations. We have only to think of the ever-increasing influence European music and instruments exercise in India in our time, in order to understand how Persian and Arabian inventions were introduced with the Mohammedan invaders and adopted by the people. An instrument of this description is the *Sitar* (Nos. 33 and 34). The name is Persian and means three-stringed instrument. Its invention is commonly credited to Amir Chusru of Delhi in the twelfth century. It is now the most popular instrument of Northern India, its technique being considerably easier to master than that of the *Vina*. It has eighteen movable frets and is played by means of a plectrum of wire placed upon the forefinger, the thumb being usually pressed firmly upon the edge of the belly of the instrument, so that the position of the right hand shall change as little as possible. 'he sound is not so sweet and pleasant as that of the *Vina*, d the player should be at some distance from the listener.

As it is impossible to describe every instrument in the collection, I wish to draw attention to two more interesting devices, Nos. 40 and 42. No. 40 is the Indian dulcimer, called *Svaramandalam* or *Qanun*. It comes probably from Arabia or Persia. There are usually twenty-one strings, some of brass and the rest of steel, and it is tuned to the

intervals of any of the Indian scales as required by the musical mode that is being played. It is played with two wire plectra, worn upon the finger-tips of the performer. In his left hand the player holds an iron ring somewhat like a quoit, which enables him to produce all sorts of grace and embellishments. There is only one string to a note. The tune is sweet and soft; it reminds one rather of the old clavichord.

The other instrument is of the same species. It is called *Kattyayana Vina*, being the invention of the divine sage of that name. Sometimes it is called *Shatatantri*, the hundred-stringed. In use and sound it very much resembles the *Qanun*.

There are two ways of playing a string instrument, one is by twanging the strings, the other by drawing a bow across them. The bow is mostly of horse-hair and the friction is increased by applying a resinous substance to the hairs. The Indians maintain that their ancestors invented the bow, and a very ancient instrument—not represented in this collection—the *Ravanastram* is ascribed to Ravana, the ten-headed demon-king of Ceylon. However this may be, the number of exceedingly primitive fiddles found all over India, many of them with only one string, seems to support the idea that the fiddle and the fiddle-bow are indigenous to India. The different localities where the fiddles exhibited were found speak clearly of the universal use of this instrument. Nos. 47 and 48 come from the Khasi and Jaintia hills in Assam, No. 52 from Chittagong; still further east in the Shan States is the home of No. 50. No. 49 is a Tibetan instrument. Bengal is represented by Nos. 45, 46, 57 and 58. The Central Provinces have sent Nos. 51, 56 (Balaghat District) and Nos. 53 and 55 are from the Mahratta tribes of that province. The Punjab is represented by Nos. 43 and 44 and Bombay by No. 54.

Of the great number of types some deserve closer attention, partly because of their wide distribution, partly because of their high musical qualities. Both reasons apply to the *Sarangi* or Indian fiddle (Nos. 43 and 44), which is found from Cape Comorin to Kashmir and forms an indispensable item at every dancing or theatrical performance. The tone is mellow and pleasant and very much resembles that of the viola. It possesses three thick gut strings, to which a fourth string of wire is sometimes added. Beneath these are 15 sympathetic strings of wire,

tuned chromatically. The *Sarangi* is made from a single block of wood hollowed out and has a parchment belly. When played it is held vertically, as is the case with practically all bow instruments. Curiously, though it requires great skill to play it well, the *Sarangi* is not considered good form by high caste musicians and is only played by low caste Hindus or Mussalmans. Probably the fact that the hide of an animal is used in its construction makes it impure for a respectable Hindu. This is the case with the *Sarinda*, a very common Bengali instrument (No. 62). It has a curiously shaped body, of which the upper half is left open.

We shall conclude our review of the string instruments with two very interesting types, which are not so common as the two mentioned above but infinitely more respectable, and also very difficult to play. They are the *Esrar* (No. 63) and the *Mayuri* or peacock fiddle, also called *Taush* (Nos. 61 and 60). They have movable frets like the *Sitar* to suit the musical mood or rāga, the strings being arranged in the same manner as in the *Sitar*. They also possess sympathetic strings like the *Sarangi* and can be regarded as a mixture of *Sitar* and *Sarangi*. They are the favourites of Indian ladies and are often used without the bow to accompany their songs. The peacock fiddle has its name from the peacock-like shape of the resonator.

Group II.—Wind Instruments.

The relative weakness of sound which characterises all string instruments, in India even more than in Europe, restricts their use to a small circle of listeners. The drawing-room, the dancing-ground or the corner of a village street are the places where they can be heard. They want restricted space and intimate treatment. The field of employment widens when we come to the next group, the wind instruments. The principle is simple. A column of air is forcibly pressed through a tube-like device and the long sound waves thus produced continue, gradually decreasing, through the space between the player and listener. In India wind instruments, particularly the horn and trumpet groups, are essentially open air instruments. They are the chief noise-makers at processions, at receptions and public amusements; they are the companions of warfare, they call to service in the temples.

The oldest instrument, the ancestor of all the metallic horns, is the buffalo horn (No. 68). Two parts of India, Madras and Nepal, which are famous for their metallic handicrafts, have produced practically all the brass horns exhibited here. In the North they are called *Sringa* or *Sing*, in the South *Kombu*. They are used for signals; watchmen in the villages blow them at sunset and at certain hours of the night. In all processions, temple services, and especially at marriages this horn is indispensable. It accompanies with crashing blasts funerals and cremations. It heralds with flourishes the arrival of high authorities, and to increase the noise and discordance invariably connected with such state entries in India's remoter places horn-blowers at the town or village gate make tremendous efforts to out-do their colleagues of the authority's entourage. It has also humbler uses. Wandering beggars blow it to draw the attention of kind persons; in former times also the Brinjaris, the great army contractors and predecessors of the A. S. C., used it to cheer up their bullocks and keep them from straggling.

A speciality of Nepal are the snake-shaped instruments and horns with a serpent's or tiger's head as orifice (Nos. 71, 72, 73, 75). The musical value of all these instruments is practically nil. Except one or two rather weird sounds they produce, their very construction does not permit of any display of skill.

To lengthen the column of sound produced in the wind instrument and to make the sound waves carry further two methods are employed. One is to blow the air through a number of windings, the simplest form of which is the bent horn. The other and more clumsy way is to produce long tuba-like devices either in one piece or in several pieces. In the latter case the instrument takes the shape of a telescope. All these types are represented. The tuba-type by Nos. 76—82, the type resembling the cornet-a-piston of our orchestra by Nos. 83, 84, 85, 86.

The idea of blowing the air through a series of windings might have been suggested to man by the windings of the conch shell (Nos. 90, 91). This natural trumpet is certainly very ancient and very sacred. It is the attribute of the god Vishnu, it resounded in the battles of the great war of the Bharatas, and its sound floating from innumerable temples greets the rise and the setting of the sun. The variety No. 92 is used in Nepal.

our imagination with the pictures of primitive shepherds The reed-flute has always been associated with pastoral life, and one of the most familiar idols of India is Krishna the cowherd playing the flute. We find the reed-flute everywhere in India, in Cochin China (No. 141) and the Shan States (No. 139), in the hills of Assam (Nos. 126, 128, 129, 130) and the wilds of Chota Nagpur (Nos. 148, 147), in the hot plains of the Coromandel coast (Nos. 149--156) and on the backwaters of Malabar (Nos. 137, 140). Often it is connected with special ceremonies in human life. The *Ka-Sharati* (No. 127) from the Khasi Hills in Assam is only played at funerals, the Nepalese *Basooli* (No. 144) is played by tailors at weddings and dances.

Very interesting is the combination of flute and gourd the latter serving as resonator and mouthpiece. The commonest instrument of this kind is the snake-charmer's *Poongi* (No 120), well known to even the most superficial tourist Two pipes of cane are inserted into a bottle-shaped gourd. One of them is pierced with finger-holes so [illegible] can be played upon; the other is sounded in unison [illegible] keynote as a drone.

An exceedingly curious instrument is [illegible] the three-gourd flutes (Nos. 117, 118, 11[illegible] [illegible] Abor and other Assam hill tribes. From 5 [illegible] different lengths are *inserted* into a gourd. [illegible] determined by the length of the reed and [illegible] in the *pipes* By covering the openings [illegible] leaving out one each time, a rough scale [illegible] This instrument is made on the principle [illegible] is for this reason of *wide interest*. [illegible] genous to Assam is uncertain. It [illegible] a similar instrument is used in Chi[illegible] *Cheng*, but the number of pipes is [illegible] 13, 19 and 24. It is considered [illegible] In view of the proximity of China [illegible] gourd organ is an adaptation [illegible]

Group III.—Ins[illegible]

With each group [illegible] periods of man's mental [illegible] the world of musical [illegible] must be credited to the [illegible] animals use the [illegible]

paw on a resounding object, as a hollow tree, to allure prey or to frighten away enemies. The acoustic principle is, that vibrating matter is shaken by the impact of some instrument (hammer, club or fist) and the waves thus produced are sent forth to the receiving ear of the listener. It is clear that the capacity of vibration stands in direct relation to the strength of sound. The material least suited for this kind of instrument is stone, and though a rough device like a stone-gong is met with in different countries, India does not seem to have favoured this material. Easier to work and productive of higher results are wooden instruments. Here nature itself gave the first instrument in the form of hollow trees. The shield which covered the warrior serves always as the prototype of a war-drum: beaten with club or spear it is calculated to create awe in the hearts of the enemy and to increase the courage of the warrior. Such a shield-like contrivance, though only used to accompany the peaceful art of dancing, is the Andamanese sound-board (Nos. 157, 158); its indigenous name is *Pukuta yemnga.* It represents more or less the only musical equipment of this primitive people. The shield is laid on the ground and the dancer strikes it from time to time with his feet (see plate VIII). A different type of sound-board is shown by No. 158a. It consists of a number of reeds fitted on a board. It is said to come from Arakan. A box-like device, which being hollow increases the volume of sound, is shown in Nos. 159, 160. The specimen is said to come from the Garo hills; no details are known. Common among all primitive pastoral tribes are buffalo or bullock bells made of wood. They are cheaper than metal ones and not ineffective. No. 161 is a specimen from Chota Nagpur, where it is used by the Oraons of Jagadispur. A pair of wooden cymbals is shown in No. 164. They come from Chanda, Central Provinces. It is more of a noise than a sound they produce, but still they serve the purpose of marking time. No. 165 is the equivalent of the castanets.

The curious musical devices known as "jews-harps" deserve special mention. They are well known to every boy in Europe, and have been cursed by innumerable long-suffering teachers and parents; in Assam their use has been forbidden by missionaries, who consider their strains too seductive. They are of very high antiquity, and for this reason alone should be regarded with a certain amount of

reverence. The people of the Assam hills, who are in most respects in what one might call the "bamboo age," make a "jews-harp" of a thin slice of bamboo, skilfully cutting out a narrow elastic tongue (see text-figure below). They fasten a string to the tip of this tongue, put the harp between the thumb and forefinger of the left hand, insert the whole into the mouth, and pull the string with the right hand. The cavity of the mouth is thus used as a resonator. All these instruments belong to a very primitive stage of civilisation. That a wooden instrument can, however, be used even for concert performances is shown by the xylophone of European bands and by the very ornamental Burmese representative of this type, the royal *Patala* (No. 193). The pieces of wood are of different lengths and cleverly arranged in different angles over a hollow space. The sound though thin is very pleasing and the scope of this instrument is about equal to that of a toy piano.

The vibration and therefore the resonance of the sound is much greater with instruments made of metal. The metals commonly used are alloys of copper, rarely pure copper. The sound-board translated into metal becomes the gong. It is the church bell of the Eastern cults, it calls to sacrifice and ceremony, it emphasizes the main moments of the divine service with its sound, sometimes deep and resounding, sometimes crashing. In certain parts of Assam it is a valuable possession and practically the only measure of a man's wealth. On the other hand it is employed by the beggar of India's highroads to draw attention to his existence and needs. In all these capacities it is only used by Hindus and Buddhists, never by Mussulmans. It is either flat or adorned with a bump in the centre. It is beaten with a stick, which often has attached to it a ball of felt or cloth (Nos. 166, 170).



Bamboo "jews-harp" from Assam.

While the gong never accompanies the human voice, the cymbals are a most common device to accompany all kinds of songs and recitations. Their effect is to assist in marking time. The tone varies according to the size, from a deep sound similar to that of a gong to a silvery tinkling which goes very pleasingly with softer music. The form varies. Some are simply flat discs

cups. Strange to say, the skill of the Indian performer gets surprising effects even out of a simple device like this (Nos. 172, 173 and 176).

The bell forms a very important part in all religious ceremonies of Christianity as well as in Eastern religions, except Islam. It is therefore not surprising that the bell-handle often takes the shape of a sacred emblem of the religion concerned. Thus we see among the Tibetan bell-handles the thunderbolt or "dor-je" (No. 180), amongst Indian bells the five-headed snake, etc.

A peculiar type of bell, which is between a musical instrument and an ornament, is the ankle bell. It is in common use among all dancers, male and female, and produces a tinkling, clashing sound. These bells are symbols of the profession and are held sacred. Once a female dancer has been decorated with them, which is always done with great ceremony, she cannot give up her profession (No. 187).

To make the parallel between wooden and metal instruments complete, we have a jews-harp in metal from Nepal (No. 175), on the same principle as the bamboo ones. Also a kind of castanets is exhibited which is peculiar to Bengal. It is called *Kartali* and is played in a very skilful and curious way by the muscles of the palm. The last two instruments are made of iron (No. 189).

No. 190 is a *Ka-si* or frog-drum from the Karen country. It is now out of use and the specimen exhibited here must be a century old. It is not certain whether it is an indigenous invention or a Chinese introduction.

Before dealing with the third and greatest group of percussion instruments, the drums, attention should be paid to two very interesting devices exhibited opposite the chief collections in a special show-case. No. 191 is an apparatus similar in its outward appearance to a small piano. The sound is produced by a small hammer striking bells of various size. The hammers are connected with the keys in a manner similar to the felt hammers of our piano. The name of the instrument is *Saptagantika*, *i.e.*, seven bells. In reality the number of bells is twice seven.

No. 192 is called *Jaltaranga*, meaning water-waves. It consists of eleven China cups into which various quantities of water are poured, thus regulating the pitch.

The cups are beaten with two small wooden sticks It is used both as a solo instrument and in orchestra

The material that is now mostly used in the manufacture of percussion instruments is the skin of animals It has, however, to fulfil conditions very similar to those of the stringed varieties, for the skin in itself has as few sound-qualities as a loose piece of string or gut It must be tight and it will give a sound of more volume when stretched over a hollow body To keep the skin tight it is stretched over a frame This device we classify under the name of tambourine The addition of a hollow body transforms the tambourine into a drum The great variety of drums one meets everywhere in India, and of which the collection under review gives a fair if not quite complete idea, leads one to the conclusion that this instrument plays a far more important part in Indian music than it does in Europe With us chiefly graduated intensity in pointing the rhythm is all that we expect from the drum It does not articulate the metre of the singer's melody or add variety to it by means of a cross-metre Nor is the pitch made a chief constituent of harmony Only lately have European composers used the quality of sound of different drums in order to add peculiar shades to the score All this is done by the Indian musician, and the drummer is much more of a *maestro* than his European colleague His rhythm shows great variety, it is seldom that more than a few bars out of hundreds are played in exactly the same way Moreover, the drumming is practically continuous The pitch of the drum is highly important, as it is invariably the key-note and in many cases the singer's only accompaniment As regards the quality of sounds, it depends to some extent on the size and shape of the instrument, rarely on a combination of drums, but chiefly on the extremely skilful way of beating it Drums in India are beaten with the full hands and fingers To play with sticks is considered inartistic and occurs only during processions and ceremonies, where the aim is to produce a maximum of noise

The tuning is done in different ways Sometimes water is sprinkled on the skin, sometimes a mixture of rice flour and water is applied, but the more accurate manner is the tuning with leather braces, under which small pieces of wood are placed

The endless variety of drums makes a detailed description an impossibility. Only the main types will be mentioned. In the tambourine class we see first an instrument that very much resembles a gong, except that it is eight-cornered. It is called *Duff* or *Duffde*. It is struck with the fingers of the right hand. A similar instrument, but of circular shape is No. 195, the *Thambatti* of South India. It is commonly employed by the lowest castes. No. 196 is a Nepalese tambourine from Sonada, called *Dāmphoo*. It is generally played at weddings and nautches. The nearest approach to the European tambourine is the *Khanjeri* of Madras. In the wooden hoop are placed slits containing pieces of metal strung together, which clash when the instrument is shaken. Nos. 200, 201, 202 are common small tambourines known as *Dindimi*.

Amongst the drums proper the first class is what we call kettle-drums. The vellum is stretched over a pot, which serves as resonator. These drums are known all over India under various names. Their chief representative is the *Nagara* (Nos. 204, 209), known as *Dundubhi* in the old Sanskrit epics. It was used in war and religious ceremonies, and is still used in temples at the present day. It is beaten with two curved sticks. The shell is made of copper, brass or sheet-iron rivetted together. Various combinations of this kind are met with in different parts of India. One sees frequently, especially with wandering theatrical troups, a bigger drum of this type together with a smaller one (No. 205). They are tied to the left hip and beaten with sticks. Another possibility is to use two small drums of equal size, either alone or together, with a big one (Nos. 216, 217, 218).

Of peculiar shape is the type called *Tabla* (No. 221). It has a copper shell, long and rather narrower than the *Nagara* kind. It is generally used together with the *Bahya*, *i.e.*, the left one. This *Bahya* has a shell bored out of a single block of wood, the bottom being broader than the top and has tuning blocks, which show that it is meant for serious concert work. This combination is indeed the common concert drum of Bengal (Nos. 222, 223).

Sometimes the kettle-drum is combined with a stand to give it greater stability (No. 226).

A very curious type, and exceedingly ancient, is the *Dàmuru*. It has the shape of an hour-glass and is played

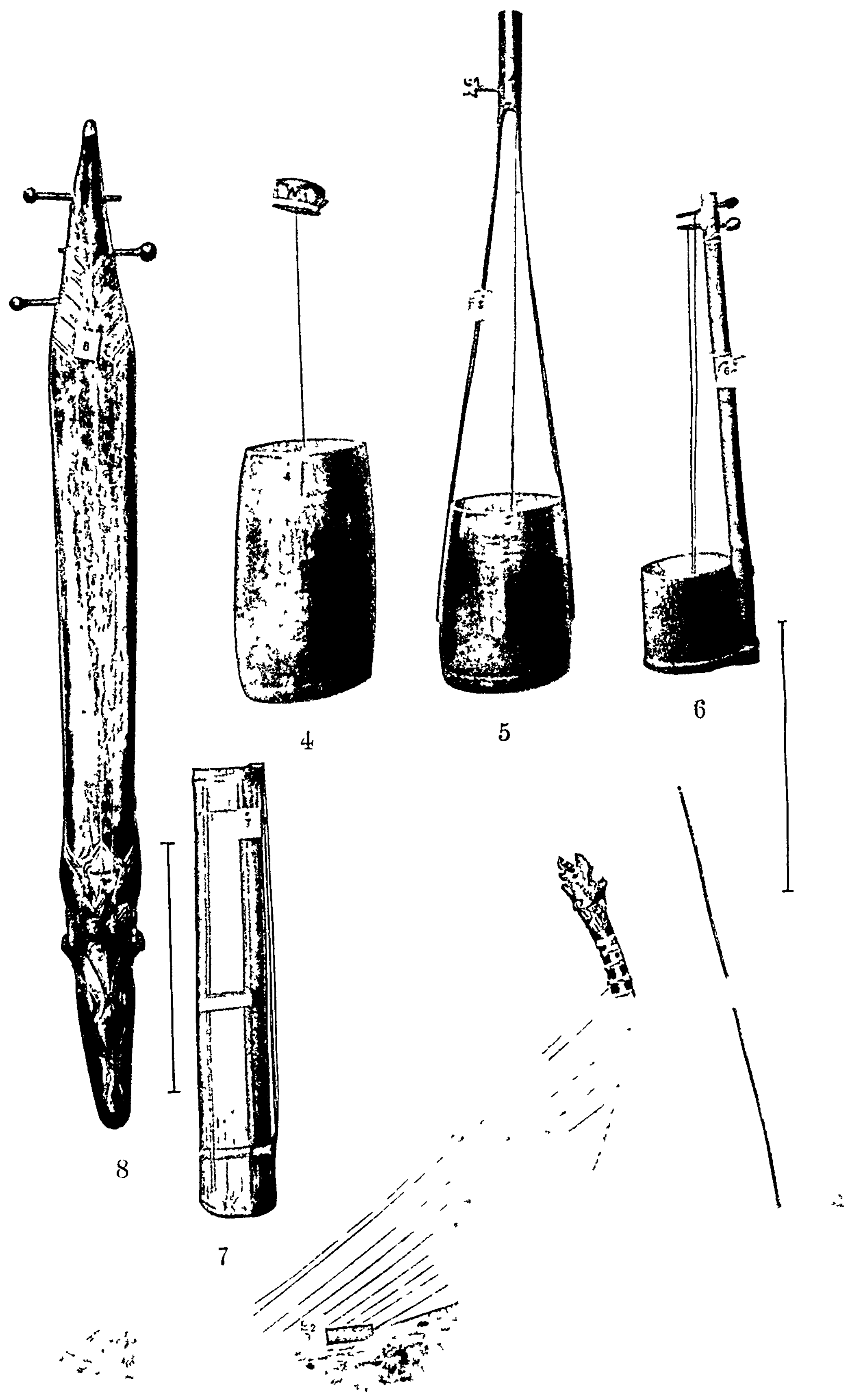
in the following manner A small stick or a piece of lead is attached to a string, which is wound round the middle When shaken, the striker at the end of the string alternately touches each head This way of playing at any rate applies to the smaller varieties, which are used by mendicants, jugglers and similar people The bigger ones are beaten with the hand or a small drum stick The South Indian name for this type is *Udakkai* (Nos 234, 238) In Hindu Mythology it is an attribute of the terrible aspect of Shiva's Sakti, Dūrgâ It is probably in this connection that the instrument took the gruesome form shown by the Tibetan skull drums These instruments belong to the same type of tantric worship as the thigh bones described above A strange variety is the tortoise-shaped drum *Dhengaroo* from Nepal (No 248)

Of the many varieties of the two skin drums two types are especially common and more or less representative The first is the *Dhol*, the second the *Mridang* In the *Dhol* type the walls of the shell are straight and stand at right angle to the skins in the *Mridang* there is a break in the middle of the wall and the skins form an angle of more than 90° with the walls The *Dhol* and its varieties are usually heard at weddings and other festivities The shell is mostly wood hollowed out of a solid block The size of the shell varies greatly, its thickness varies from $\frac{1}{8}$th to $\frac{1}{10}$th of an inch The heads are stretched round hempen hoops, fastened to the shell and strained by means of thongs of leather interlaced A band of leather passed round the shell and over the braces serves to tighten the instrument up to the desired pitch The instrument is beaten both by hand and stick Its smaller varieties are called *Dholkee* *Dhooluk* and *Dâk* are larger varieties

The *Mridang* (No 273) is considered to be the most ancient of the Indian drums It is, like the *Tabla*, a concert drum Its name means literally "clay body" and probably the body was originally made of clay, this would account for its peculiar shape, which, indeed, reminds one of two bottomless flower pots joined at the rims The shell is now made of wood, larger at one end than the other The skins are tuned in the same manner as we have seen with the *Bahya* The drum is played only with the hands, finger tips and wrists, and to become proficient in this art takes years It is not surprising that an instrument of such

remote origin and general use should have been supplied with a divine maker. We are told that Brahma himself invented it when Mahadeva wished to perform his dance of victory after having defeated the mighty demon Tripurasura, and the first to play on it was Ganesha.

After learning something about the little world of Indian musical instruments it will not be amiss to gain an idea as to how the different varieties are mixed in a real Indian orchestra. The generosity of the late Raja Sir Sourindro Mohun Tagore, to whom we owe an immense debt of gratitude, has presented us with a set of instruments that have actually been played together. They are exhibited in a separate case with special labels. Here we meet again the aristocracy of India's musical instruments, this time unmixed with the lower ranks of shepherd-flutes and juggler-drums.



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DESCRIPTION OF PLATE I.

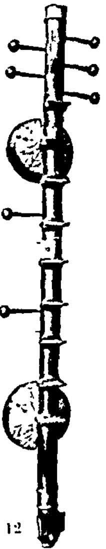
The lines on this plate represent a length of one foot. The *line between figures* 7 and 8 refers to both figures, and that on the right of figure 6 to figures 4, 5, 6 and the unnumbered figure below 6.

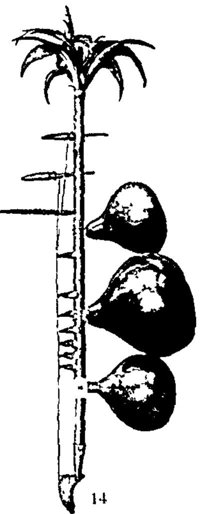
No.	Name.	Locality.	Donor.	Date of collection.	Page.
Unnumbered	Bull Roarer (Mohammedan child's toy).	Chittagong, outskirts of town.	Dr. N. Annandale.	21st January 1913.	2
2	Harp.	Burma.	Not known.	Not known.	4
4	Ananda Lahari.	Calcutta.	A. S. B.	....	5
5	*Nandin or Gopichand.*	Chota Nagpur.	Not known.	Not known.	5
6	Thanthona.	Tanjore, Madras District.	Not known.	Not known.	5
7	*Tsaung (Danu child's toy).*	Ho-Ho, Yawnghwe State, S. Shan States.	Dr. N. Annandale.	March, 1917.	5
8	Mingas.	Burma.	A. S. B.	....	6

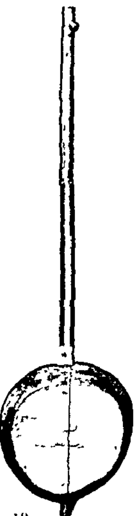
DESCRIPTION OF PLATE II.

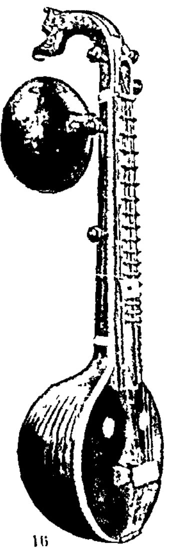
The lines on this plate represent a length of one foot. The line between figures 12 and 14 and that between figures 16 and 19 refers in each case to both figures.

No.	Name.	Locality.	Donor.	Date of collection.	Page.
12	Mahati Vina.	Calcutta.	A. S. B.	....	6
14	Kinnari.	Godavari District, Madras.	Collector of the Godavari District.	16th October 1899.	6
16	South Indian Vina.	Tanjore, Madras.	Not known.	Not known	7
19	Ektar.	Not known.	A. S. B.	....	7


12


14

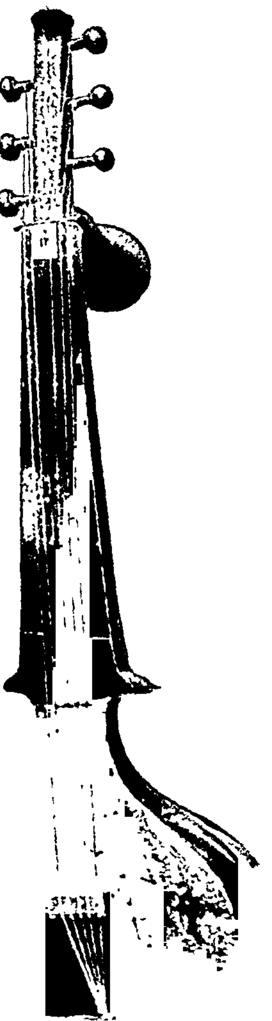

19


16

DESCRIPTION OF PLATE III.

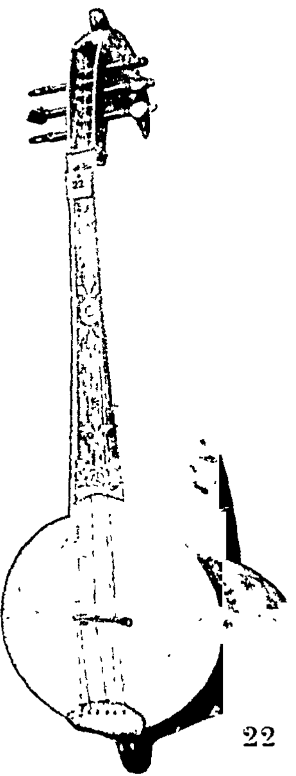
The lines on this plate represent a length of one foot. The line between figures 17 and 22 and that between figures 32 and 39 refers in each case to both figures.

No.	Name	Locality	Donor.	Date of collection.	Page.
17	Sur-Vina.	Not known	A. S B	...	8
22	"Bipanchi" Vina.	Calcutta.	A S B	....	..
32	Sitar.	Calcutta.	Babu S B. Mukherji.	31st October 1910.	8
39	Tamburu.	Tanjore, Madras.	Not known	Not known.	8

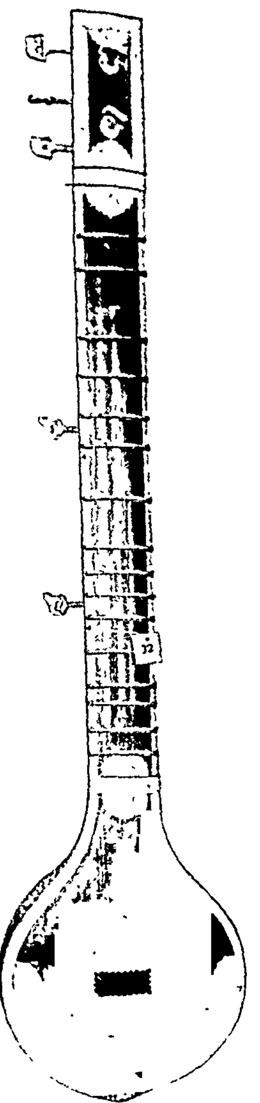




17

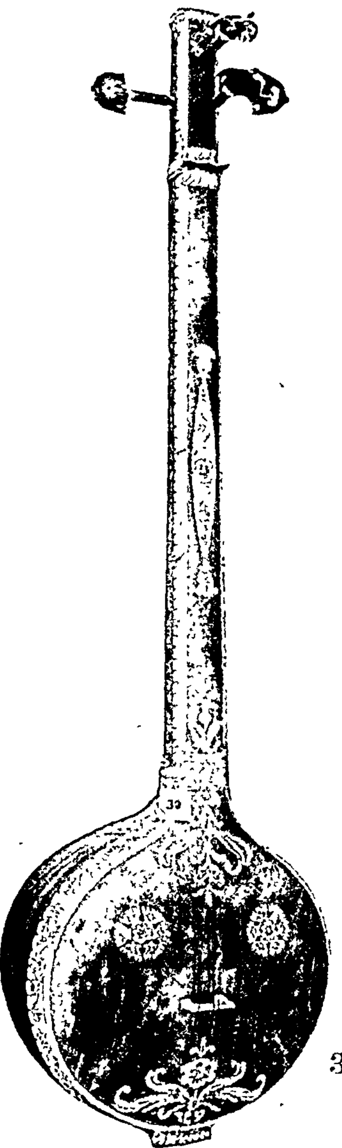


22



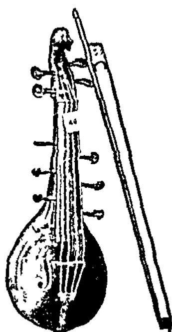


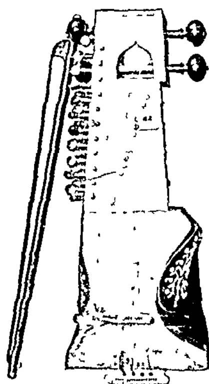
32



39

PLATE IV



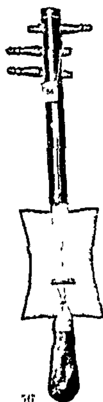


46

44








62

41

50

DESCRIPTION OF PLATE V.

The lines on this plate represent a length of one foot. The line between figures 59 and 60 refers to both figures.

No.	Name.	Locality.	Donor.	Date of collection.	Page.
42	Kattyayana Vina.	Calcutta.	A. S. B.	....	9
59	Esrar.	Not known.	A. S. B.	....	10
60	Mayuri or Taush	Panjab.	Not known.	Not known.	10

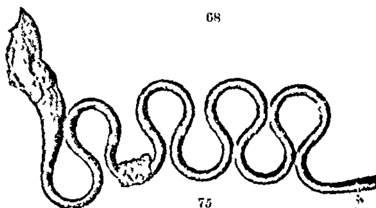
DESCRIPTION OF PLATE VI.

The lines on this plate represent a length of one foot. The line between figures 75 and 70 refers to figures 68, 75, 70 and 73, and that on the left of figure 85 to figures 87, 85 and 91.

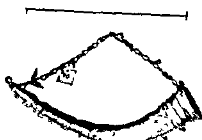
No.	Name.	Locality.	Donor.	Date of collection.	Page.
68	Buffalo Horn.	Not known.	Not known.	Not known.	11
70	Kombu.	Madras.	A. S. B.	....	11
73	Horn (with tiger's head as orifice)	Nepal.	A. S. B.	....	11
75	Snake-shaped Horn	Nepal.	A. S. B.	....	11
76	Copper Telescope Trumpet.	....	A. S. B.	....	11
79	Copper Trumpet.	Sonada, Darjiling District.	Purchased.	1904	11
85	Copper Trumpet.	Nepal.	A. S. B.	....	11
87	Trumpet (made of human thigh-bone).	Bhutan.	A. S. B.	....	12
91	" Sankha ".	Madras.	Not known.	Not known.	11



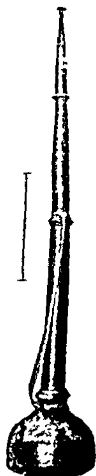
68



75



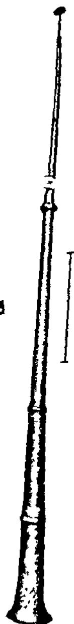
70



70



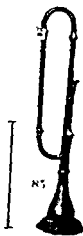
78



76



87



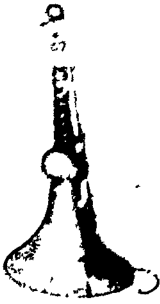
85

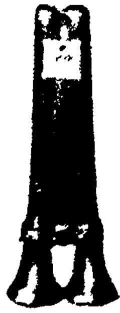


91

PLATE VII.

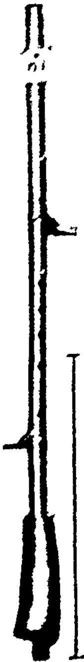

93

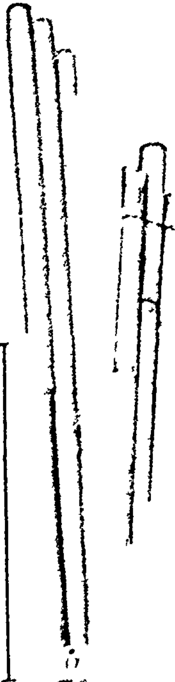

107

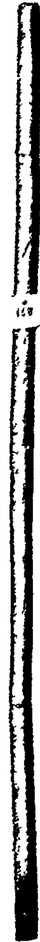

102

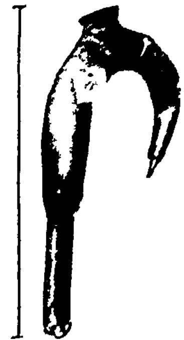

94


120


133


1


148


121

DESCRIPTION OF PLATE VII.

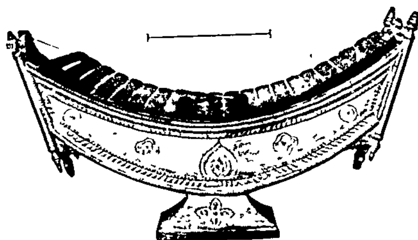
The lines on this plate represent a length of one foot. The line between figures 93 and 107, 108 and 94 and 131 and 146 refers in each case to both figures.

No.	Name.	Locality	Donor.	Date of collection	Page.
93	Shanal.	Chittagong.	A. S B	..	12
94	"Karoa."	Tanjore, Madras	Not known	Not known	..
99	"Moorodee."	Sonada, Darjiling District	Purchased.	1904.	..
107	Shanal.	Chota Nagpur	Not known	Not known.	12
108	Shanal.	Not known	A S B	....	12
110	Shanal.	Not known	A S B	...	12
117	Gourd Flute.	Chittagong Hill Tracts	A S. B	....	13
120	Poongi (Snake charmer's Flute).	Godavari District	Collector of the Godavari District	1892	13
121	"Bhiree."	Ambagoan, West Khandesh, Bombay	Reporter on Economic Products.	1909	..
131	"Bansari"	Amritsar, Panjab	Reporter on Economic Products.	1909	.
131	"Buggaro."	Nilgiris.	Not known.	Not known.	..
140	Whistle.	Sonthal Parganas.	Mr J Cleghorn.	1892	..
146	"Murali"	Chota Nagpur	Not known	Not known.	..

DESCRIPTION OF PLATE VIII.

The lines on this plate represent a length of one foot. The line below figure 159 refers to this figure and figures 161 and 158A.

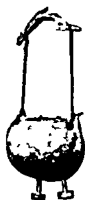
No.	Name.	Locality.	Donor.	Date of collection.	Page.
157	Pukuta Yemnga	Port Blair, Andamans.	A. S. B.	....	14
158A.	Dulcimer (made of reeds).	Arakan.	A. S. B.	....	14
159	Wooden Sounding Trough.	Andamans.	A. S. B.	....	14
161	Wooden buffalo bells.	Chota Nagpur.	Not known.	Not known.	14
193	Patala.	Burma.	Not known.	Not known.	15



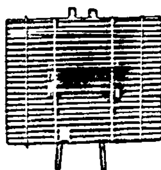
193



159



161



158*a*



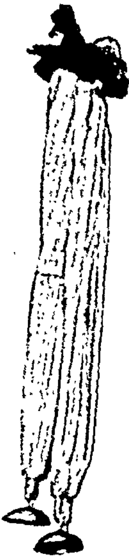
157

DESCRIPTION OF PLATE IX.

The lines on this plate represent a length of one foot The line between figures 173 and 166 refers to these two figures and figure 176, and that between figures 181 and 183 to these two and figure 180.

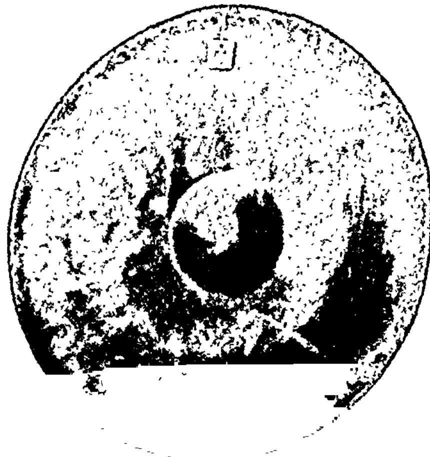
No.	Name.	Locality.	Donor.	Date of collection.	Page.
166	Gong.	Not known.	A. S. B.	....	16
173	"Khanjani."	Not known	Not known.	Not known.	16
176	Brass cymbals	Madras.	Not known.	Not known.	15
180	Tibetan bell.	Sonada, Darjiling District	Purchased.	1904.	16
181	Bell.	Darjiling	Not known.	Not known.	..
183	Bell.	Not known.	A. S. B.	....	..
185	Bell.	Tibet(?)	Purchased.	1906.	..
189	Kartali	Not known	A. S. B.	....	16

PLATE IX.



173

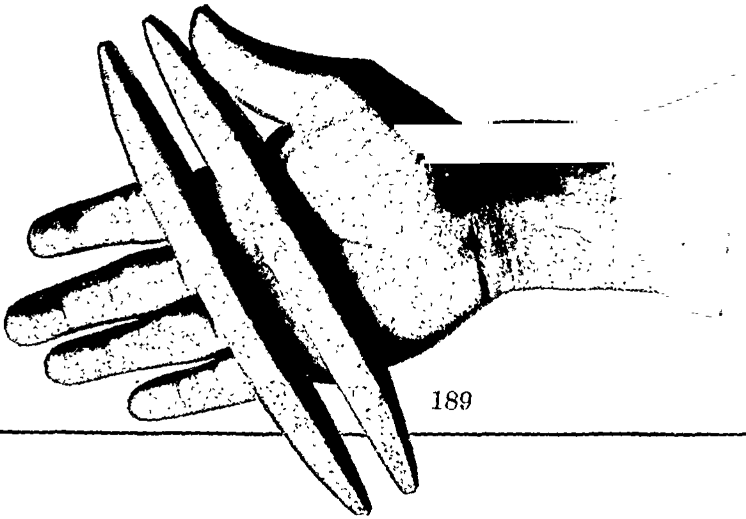




166

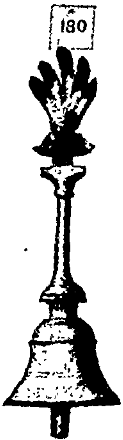


176

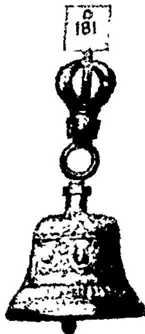


189



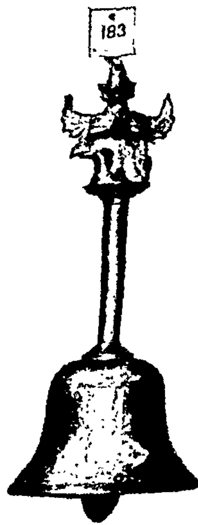


180



181





183



185

DESCRIPTION OF PLATE IX.

The lines on this plate represent a length of one foot. The line between figures 173 and 166 refers to these two figures and figure 176, and that between figures 181 and 183 to these two and figure 180.

No.	Name.	Locality.	Donor.	Date of collection.	Page.
166	Gong.	Not known.	A. S. B.	....	16
173	"Khanjani."	Not known	Not known.	Not known.	16
176	Brass cymbals	Madras.	Not known.	Not known.	15
180	Tibetan bell.	Sonada, Darjiling District	Purchased.	1904.	16
181	Bell.	Darjiling	Not known.	Not known.	..
183	Bell.	Not known.	A. S. B.	....	..
185	Bell.	Tibet.	Purchased.	1906.	..
189	Kartall.	Not known.	A. S. B.	....	16

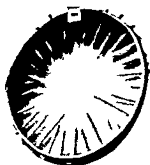
DESCRIPTION OF PLATE X.

The lines on this plate represent a length of one foot. The upper line on the left refers to figures 196, 197, 203, 198 and 194.

No.	Name.	Locality.	Donor.	Date of collection.	Page.
190	Ka-si (or Frog drum).	Karen country.	A. S. B.	....	16
194	"Dumpha."	Not known.	A. S. B.	....	..
196	Damphoo.	Sonada, Darjiling District.	Purchased.	1904.	18
197	"Dasari Thappa."	Tanjore, Madras.	Not known.	Not known.	..
198	"Janjh Khanjani."	Not known.	A. S. B.	....	..
203	"Khendra."	Chota Nagpur.	Not known.	Not known.	..

PLATE X.

196





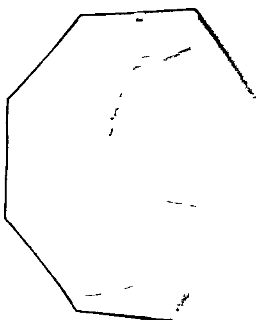
197

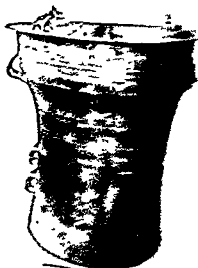


203

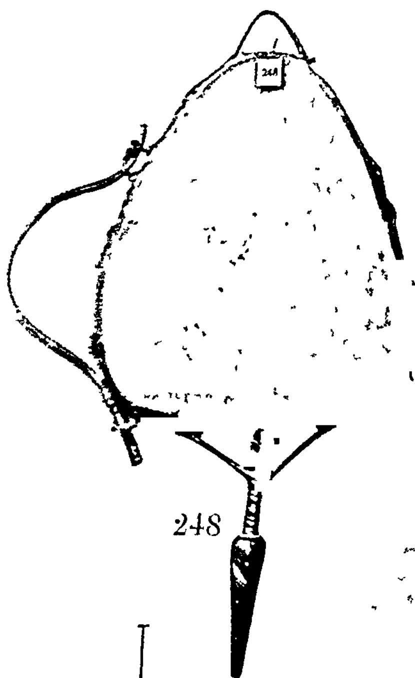




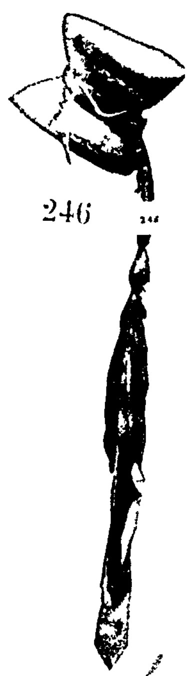






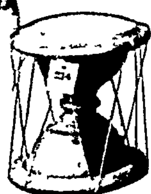


248

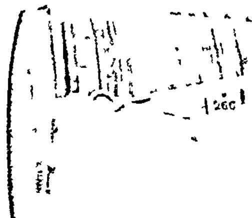


246

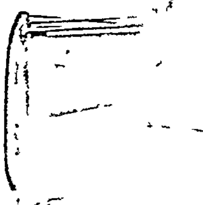




234



260



262

DESCRIPTION OF PLATE XI.

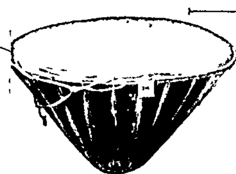
The lines on this plate represent a length of *one* foot. The line in the centre refers to figures 236, 248, 246, 234, and 238, *and the line below* figure 266 to that figure and figures 262 and 267.

No.	Name.	*Locality.*	Donor.	Date of collection.	Page.
234	Udukkai.	Tanjore, Madras.	Not known.	Not known.	19
236	"Dambaroo" (Tibetan).	Sonada, Darjiling District.	Purchased.	1904.	..
238	Udukkai.	Tanjore, Madras.	Not known.	*Not known.*	19
246	Dàmuru.	Darjiling.	Not known.	Not known.	18
248	Dhengaroo.	Sonada, Darjiling District.	Purchased.	1904.	19
262	"Pombai."	Tanjore, Madras.	Not known.	Not known.	..
266	"Odal."	Tanjore, Madras.	Not known.	Not known.	..
267	Drum.	Madras.	Not known.	Not known.	..

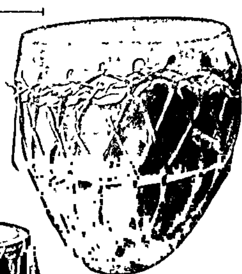
DESCRIPTION OF PLATE XII.

The lines on this plate represent a length of one foot. The line at the top refers to figures 214 and 204, the line on the left of figures 222 and 221 to these two figures and that on the right below figure 279 to that figure and figure 275.

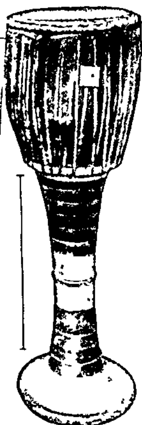
No.	Name.	Locality.	Donor.	Date of collection.	Page.
204	Nāgara.	Not known.	A. S. B.	....	18
214	Nagara.	Manbhum District, Bengal.	Not known.	Not known.	..
221	Tabla.	Not known.	A. S. B.	....	18
222	Bañya.	Not known.	A. S. B.	....	18
226	"Mughi Kara" (Kettle-drum on stand).	Chittagong.	A. S. B.	....	18
275	"Maha Mridang."	Not known.	A. S. B.	....	19
279	"Khol."	Not known.	A. S. B.	....	..

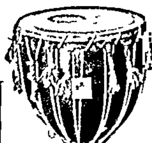


214

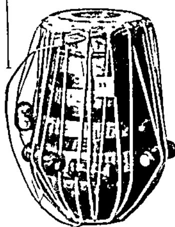


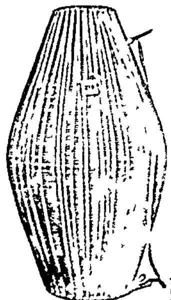
204





222

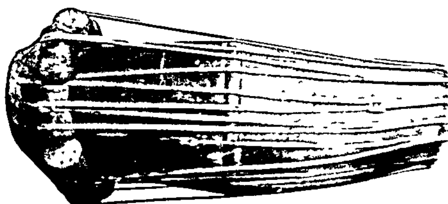




226

221

279

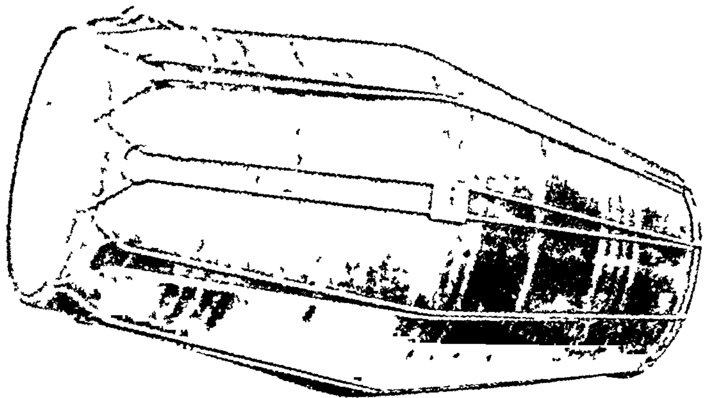


275

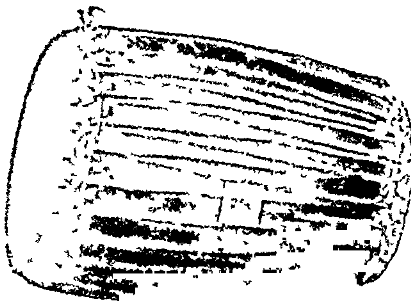
The lines on this plate represent a length of one foot. The line between figures 249 and 256, 284 and 281 and 282 and 277 refers in each case to both figures.

No.	Name.	Locality	Donor.	Date of collecton..	Page.
249	Dhooluk.	Not known.	A. S. B.	....	19
256	"Rammathuputa."	Godavari District, Madras.	Collector, Godavari District.	1892.	..
277	"Thaval" or "Dole."	Tanjore, Madras.	Not known.	Not known.	..
281	"Madal."	Manbhum District, Bengal	Not known.	Not known.	..
282	Drum.	Naga Hills, Assam.	Not known.	Not known.	..
284	Drum.	Nowgong, Mikir Hills, Assam.	Not known.	Not known.	..

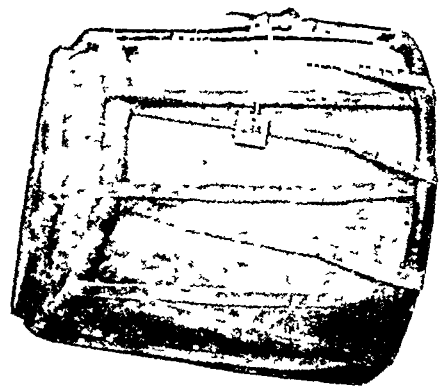
PLATE XIII.



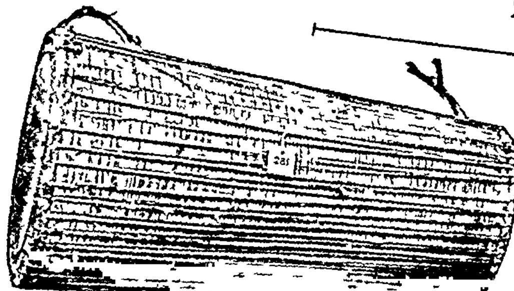
249



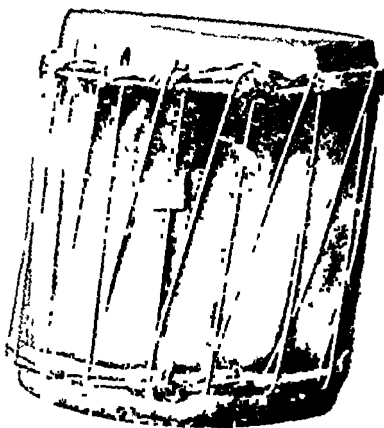
256



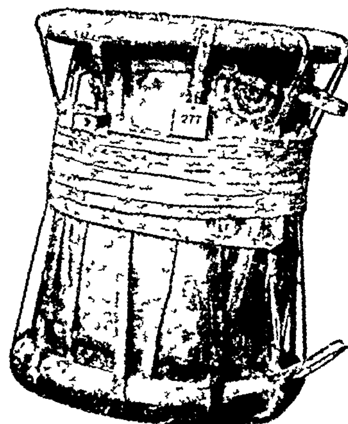
284



281



282



The lines on this plate represent a length of one foot. The line between figures 249 and 256, 284 and 281 and 282 and 277 refers in each case to both figures.

No.	Name.	Locality	Donor.	Date of collecton..	Page.
249	Dhooluk.	Not known.	A. S B	....	19
256	"Rammathuputa."	Godavari District, Madras	Collector, Godavari District.	1892.	..
277	"Thaval" or "Dole"	Tanjore, Madras.	Not known.	Not known.	..
281	"Madal."	Manbhum District, Bengal.	Not known	Not known.	..
282	Drum.	Naga Hills, Assam.	Not known	Not known.	..
284	Drum.	Nowgong, Mikir Hills, Assam.	Not known.	Not known.	..